



Goddard Space Flight Center 2009 Sample Student Projects

Required Academic Level

Junior/Senior Undergraduate

Category

Engineering

Subcategory

Detectors & Sensors

Project Title

Astro-H Soft X-Ray Spectrometer (SXS)

Project Description

The intern will assist in the characterization of the Astro-H Soft X-ray Spectrometer (SXS) electrical subsystem breadboard electronics. The laboratory testing of the electronics may include the development and operation of simulation hardware and software interfacing with existing hardware designed for the SXS instrument. Analog simulation hardware may include low voltage detector simulators. Digital simulation hardware may include command and data interface simulators. Simulation software may include Ground Support Equipment (GSE) needed to collect and evaluate the performance of the hardware.

Mentor's Expectation of Student

The mentor will expect the intern to initially become familiar with the instrument requirements and the desired approach to characterizing the instrument hardware. Familiarity with the design specific hardware and software also needs to be developed.

Discipline of Project and/or Background Needed to successfully complete the project

Computer Hardware; Electrical Engnr

Skills

Listening/Note Taking, Analysis, Leadership, Organization, Problem Solving, Research, Teamwork, Technical Writing, Time Management, Data Acquisition, Oscilloscopes, Electronics Testing, Embedded Systems/Microcontrollers, FPGA, Windows, Excel, Word, Powerpoint, C, LabView, Software Testing